Child Well-Being, Social Amenities, and Imperfect Information: Shedding Light on Family Migration to Urban Slums

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Abstract

Urban areas in developing countries are almost universally associated with lower child mortality and better educational opportunities than rural areas. Yet large urban inequities exist, and among the urban poor, the advantages of urban social amenities and public services are questionable. This paper, which is based on ethnographic information and survey data collected in two Nairobi slums in 2004, first argues that parents use perceptions of urban-rural differences in social amenities to carefully weigh concerns about child well-being when deciding whether to embark on family migration. This helps explain why more than half of all children to married migrant men in the Nairobi slums are not living in Nairobi. It secondly argues the importance of the conjugal relationship for family migration. In particular, spousal distrust and lack of information may induce family migration even if access to rural amenities through split migration, where only the husband migrates, would otherwise have been preferred.

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Introduction

Africa has the world's highest urbanization rates with an annual average of urban growth of 4.0%, almost two times faster than Latin America and Asia. Currently, 37% of the total population lives in cities and by 2030 it is expected to rise to 53% (UN, 2004). To explain migration patterns in developing countries, much of the migration literature has been centered on issues of labor migration and job search. Some has also explored the importance of migration for families in mitigating economic risks. Far less attention in studies of migration has been paid to the role of social amenities and public services in motivating migration decisions, despite a recognition that there exists large rural-urban differences in such amenities and services in developing countries. Garenne (2003) points out that since the 1950s urban areas, also in developing countries, are associated with lower child mortality than rural areas. Yet, it is becoming clear that there exist very large urban inequities, with the urban poor particularly at risk of both infectious and chronic, degenerative diseases (Garenne, 2003; Harpham and Molyneux, 2001).

Nairobi, Kenya, is one such example, attracting large numbers of migrants in search of employment and higher wages. Its population of approximately 3 million is growing at 7 percent per annum, one of the fastest growing urban areas in Africa. Most of this growth is a result of rural-urban migration, rather than from immigration or natural increase (APHRC, 2002). Most of these migrants will move into the cities' sprawling slums, where more than 70 percent of the Nairobi population is estimated to live (UN Habitat, 2004). [12] In such environments, the urban advantage of social amenities and public services is questionable, particularly for those with children. A common migration strategy for married migrants is the so-called *split migration*, where married men migrate to Nairobi without their wives or children. Survey data collected in two of Nairobi's informal settlement areas in 2004 indicated that among married

[1] A 2002 UN conference defined a slum household as a group of individuals living under the same roof lacking *one or more* of these conditions: (1) Access to improved water, (2) Access to improved sanitation facilities; (3) Sufficient-living area, not overcrowded; (4) Structural quality/durability of dwellings; (5) Security of tenure

[2] This compares unfavorably to Africa as a whole, where still an estimated 6 out of every 10 urban residents lives in slums (UN Habitat, 2004).

migrants 48 percent were classified as split migrants, and the remaining 52 percent as joint migrants, living together with their wives in Nairobi.[3] The presence of these two different migration strategies naturally raises the question as to what motivates them.

There is a growing literature linking migration with family strategies, with some focusing on the importance of forms of split migration for families to diversify their resource base and mitigate economic risks. But, as Lucas (1997) points out, the empirical literature on family migration strategies still offers no more than a few isolated examples (see, for example, Rosenzweig and Stark (1989)). This paper contributes to this literature by exploring the importance of two additional dimensions. The first is the issue of differences in the perception of urban-rural social amenities and public services affecting child well-being. These, we will argue, feature prominently in parental decisions on the optimal migration strategy. We show that there is considerable variation in the migrant ratings of urban (dis-)amenities relative to those found in their home areas, and that these ratings correspond closely with their particular migration decision[4]. The second issue is the importance of the nature of the conjugal relationship between husbands and wives, which has similarly important migration implications. Some migrant husbands, for example, may be reluctant to remit money to their rural wives out of concern that their wives will start their own businesses or divert the remittances to their brothers and sisters elsewhere. In situations where urban husbands do not have enough information about their rural spouses, split migration may not be the preferred arrangement despite having favorable views on rural social amenities and public services.

The analysis below is based largely on survey data collected by De Laat in 2004 in two separate Nairobi informal settlement communities called Korogocho and Viwandani[5]. A random sample of 1817 'eligible'

[3] Among heads of households borne outside Nairobi, married formally or informally. The proportion among all married couples regardless of place of birth was 43 and 57 percent, respectively.
[4] The assumption underlying the argument is similar to that of the equalizing differences theory of labor market wages (Rosen, 1986); people care not only about wages and the goods these wages can buy (the pecuniary aspect of migration), but non-wage dimensions are also important.
[5]Korogocho location, Kasarani division, Nairobi District; Viwandani location, Makadara division, Nairobi district.

heads of households were interviewed, where eligibility was defined as being *ever married* and *between the ages of 24 and 56 years*; i.e. (1) heads of households who were divorced or separated (153 in total), or widowed (150); heads of households who were married and lived with their spouse together in the Nairobi informal settlement (858 in total); or heads of households who were married but lived split from their spouses (who usually live in the up-country village) (656 in total). There was no stratification by informal settlement area resulting in 60 percent of respondents from Viwandani and 40 percent from Korogocho. The data are quite unique in that the unit of observation was the immediate family. In other words, not only did it collect detailed information on all household members living with the head in Nairobi, but also detailed information on the spouse and children of the head in case they were living elsewhere.

Migration, Slums, and Child Amenities

The origins of split migration can be traced back as early as the city's founding in the early 1900s under British Colonial rule. During the colonial period, which lasted until 1963, Kenyan families were discouraged, often legally prohibited, from moving into the city. The implementation of the *Vagrancy Act* in 1922 allowed for 'unauthorised' huts to be demolished. Yet Nairobi continued to attract migrant men, as well as their families, some of which were displaced by rural settlement schemes. Following Independence in 1963, Kenya's first president Jomo Kenyatta continued to discourage migrants from coming to Nairobi. The government provided few services in the informal settlement areas, and in fact called for 'Turudi Mashambani" ("Let's return to the rural homes"), a call sometimes enforced through demolitions (Hirst and Lamba, 2004).

While today it is neither illegal nor explicitly discouraged that wives migrate with their husbands to the city, split migration persists. That married women are missing is shown in the population pyramids of

Figures 1 and 2, which compare the age-sex composition from a representative sample of all of Nairobi's slums with that of the nation as a whole.

[Figure 1 and 2]

Among the Nairobi slum population, adult men and women are present in approximately equal numbers in the 20-24 age category. After that, adult men strongly outnumber adult women in all cohorts; by 59% (25-29), 105% (30-34), 102% (35-39), 139% (40-44), 173% (45-49), 108% (50-54), and by 112% (55-59).

One hypothesis to explain the continued existence of split migration is that it is simply a means toward the end goal of joint migration with young split migrants seeking to improve their job prospects and overcome their liquidity constraints before the entire family moves to Nairobi (see for example, Agesa and Kim (2001)). If this were the case, we would expect to find that joint migrant men are on average older than split migrant men, having spent some period of time as split migrants while searching for good employment before their wives joined them. This, however, is not supported in the data, as joint migrant men are younger, not older, than split; 33.9 years on average compared to 36.4. Further, we would also expect to observe that people remain split migrants for a relatively short period of time – the time it takes a split migrant to find a sufficiently remunerative employment before his wife and children join. However, in the survey data we find that the average split migrant had been living in Nairobi for already a very long period, having moved their more than 14 years before, in fact on average around the same time as joint migrants. Interestingly too, the rural wives of split migrants are reported to have lived some period of time in Nairobi – on average 1.81 years, although this is significantly shorter than wives of joint migrants, which had moved to Nairobi more than 10 years ago. Informal discussions indicated that split migrant spouses will spent some time living together in Nairobi at the beginning of their marriage to build trust and knowledge of one another. Lastly, if liquidity constraints were preventing split migrants from

becoming joints, we would expect to find that split migrants earn less than joint migrant. However, this is not the case, with the average monthly earnings of a split head, Ksh 6,260 ($82) exceeding those of joint migrants, Ksh 5,900 ($78)[6].

A second hypothesis to explain split migration suggests that women are "left behind", remaining in the rural area to take care of the farm and the rural home while husbands move to Nairobi with their children to take advantage of better schooling opportunities. If this were the case, we would expect that a significant proportion of children to split migrants lived with their fathers in Nairobi. This, however, is not the case. As shown in Table 1[7], at least 97 percent of all children to split migrant parents lived in the rural area.

[Table 1]

In fact, we even find that a significant number of children to joint migrant parents did not live with them in Nairobi. The survey asked the heads of households to report information on their children who neither lived with them in Nairobi, or with their mothers in the rural area (in the case of split migrant heads). These were termed "non-householder children".[8]

[6] We limit the sample to migrant heads borne outside of Nairobi (aged of 25 and 55)

[7] For household heads between the ages 25-55 who were born outside Nairobi. Because split heads are on average 2.5 years older than joint heads (36.4 vs 33.9 years), the numbers in the table below are controlled for age differences through OLS regression. Adjusted for age, split migrant heads have on average 2.70 children (note that this is *not* completed fertility) while joint migrants have 2.49 children. The unadjusted numbers are 2.82 and 2.37 children, respectively. The allocation of children in the three different categories (urban, rural, non-householder) were estimated by multiplying the age-of-head adjusted average number of children in the particular age category (0-5, 6-14, 15-19) with the *actual proportion* of children in the three categories.

[8] Non-householder children were defined as children with whom the household head maintains some kind of social relationship These can be their own children living, but also orphaned children receiving their support, etc. As show in table 2, of joint migrants borne outside Nairobi, almost seventy percent of their non-householder biological children live with the grandparents. Only four percent lives on their own, while the rest lives with siblings or "other". The latter are likely pupils in rural boarding schools, which are common in Kenya. Table 3 shows that 95% of the grandparents lived in the rural area, which implies that the majority of non-householder children of joint migrants lived in the rural area.

The bottom row of table 1 shows that up to 13 percent of these children borne to joint household heads were not living with their parents in the urban area. Since 48 percent of married heads borne outside of Nairobi are split and 52 percent joint, and the number of (age-of-head adjusted) children stands at 2.70 and 2.49, respectively, these figures imply that of all biological children of primary school ages born to split and joint migrant heads, the majority of them, 53 percent, are *not* living with the head in the urban area. For infants and children of secondary schooling age the corresponding numbers are 47 and 55 percent. This is also shown in the population pyramids of Figures 1 and 2. While nationally girls and female adolescents between the ages of 5 and 19 outnumber women in the ages of 25 and 39 ('their mothers') by 108%, women in the Nairobi slums *outnumber* girls in these age categories by 17%. For men, the gap is even bigger. Boys and male adolescents exceed 'their fathers' by 117% nationally, but these adult men *exceed* them by 71% in the slums. Importantly, 1999 census statistics show that the population pyramid for Nairobi (including non-slums) is very similar to that of the country as a whole (APHRC, 2002). In sum, split migrants overwhelmingly leave their children in the rural home, and even a substantial proportion of children to joint migrants are placed with grandparents and siblings in the rural area. Thus, this does not support the hypothesis that wives are left behind in the rural area, while their children move with the migrant husband to the city to seize on the urban amenities.

Migration and Child (dis-)Amenities

"I like it in Nairobi where I can earn money, which I cannot here in the village. […]Another difference is that you'll find children going to primary school in Nairobi learn Kiswahili and English well. Here the teachers often teach in Kikuyu. Children in Nairobi are also the first ones to be informed about everything such as the latest news and fashion. However, children growing up here [in the village] tend to be more disciplined. Also, security in the slums is low and people have many problems. […]. When my kids are sick, my wife will come to Nairobi because the hospital facilities are better and cheaper there than here in the village." (John, split migrant (visiting his wife), 33 years, 2 kids (7 and 9))

To explore what could explain this quite striking picture of migration with almost equal amounts of joint and split couples, we first held a series of 16 rural and 15 urban one-to-two hour informal interviews in

2003 and 2004 before the design of the survey. Not surprisingly, the pecuniary aspect of migration featured prominently, although people universally recognized that higher wages had to be weighted against the higher cost of living in Nairobi. One of the primary motivating reasons to seek higher wages was also interesting: school fees were one of the most frequently mentioned needs to earn more money. Having your children finish primary, but particularly secondary, was seen by most as a necessary condition to have them stand a chance of attaining formal sector employment[9]. The cost of education makes clear why parents link this with migration decisions. While primary education can be costly for some[10], secondary education is very expensive for the vast majority of people, costing $200 - $400 per year, in a country whose per capita GDP is approximately $300. Hence parents indicated that they are often left with little choice but to seek urban employment if they want to put their children through secondary. School fees were the largest non-food expenditures according to a survey of Kibera slum households in Nairobi (Anderson and Baland, 2002). While the better wage opportunities for many were clear, parents continually sought to weigh the advantages and disadvantages that Nairobi offered as an appropriate place to raise children in comparison to their rural homes.

A recurrently expressed urban disadvantage, as cited immediately by John above, was the security situation of Nairobi. According to Kenya 2005 statistics from the Afrobarometer, 35% of rural residents had in the past year something stolen from the house versus 37% in urban areas, 15% of families had at least one member physically attacked in the rural area versus 26% in the urban area, and lastly, 57% of rural residents feared crime in their home versus 66% of urban residents (Afrobarometer, 2005). Given the urban inequities, this likely underestimates the crime differentials between urban slums and rural areas. There is, however, variation. For example, the mother and younger siblings of a research assistant

[9] According to labor force surveys of formal sector manufacturing firms in Kenya, the proportion of employees with a primary education dropped from 46% in 1995 to 33% in 2000 while the proportion with a secondary education increased from 48% to 66% over the same period (Manda 2002).
[10] After the 2003 Free Primary initiative, costs are mainly limited to uniforms, materials, and 'extra' fees

decided to join their slum based father in 2005 after a recent surge of attacks in their rural area by a local gang. Migrating to Nairobi's slums was seen as a safer choice.

Security concerns also involved the assessment of risk to children's health when living in the slums. On the one hand, many believed that health facilities were better than the ones in their rural homes, but the daily health risks to children living in the slums were perceived by most as much higher. A large demographic and health focused survey conducted in various Nairobi slums in 2002 by the African Population and Health Research Center (APHRC) found that not only are morbidity risks for all major childhood illnesses (fever, cough, diarrhea) higher for slum children compared to children elsewhere in Kenya, but that slum children also have less access to healthcare, including immunization, and subsequently face higher mortality rates than even their rural counterparts. For instance, APHRC reports that infant, child, and under 5 mortality rates are about 20, 65, and 35 percent, respectively, higher in the slum communities of Nairobi compared to rural Kenya while incidence of common childhood illnesses are two to three times higher in the slums relative to rural areas (APHRC, 2002). This is consistent with morbidity differentials among children in the survey itself. Limiting the sample to families whose head was born outside Nairobi, there are 1426 children 0-14 years old living in the rural area and 1387 children 0-14 years old living in the Nairobi slums where the survey was conducted. Figure 3 shows that 39.1% of urban children 0-4 versus 28.1% of rural children 0-4 were reported to have been sick with diarrhea or fever in the month prior, a significant difference.[11] After children reach the age of five there is no longer a statistically significant difference.

[Figure 3]

Another common consideration was the schooling advantages and disadvantages that Nairobi offered. At first sight, the Nairobi slum picture on education appears very poor. A 2004 fact finding mission jointly

[11] P-value of t-test: 0.0001

undertaken by the government of Kenya and major NGOs and international partners found school compounds in urban slums lacking space and pupil-teacher ratios to be among the highest in the country (GoK, 2004). It also found that the primary school net enrollment rate (NER) in Nairobi stood at 56% for girls and 64% for girls, well below the national averages of 84% and 83.2% respectively. This official enrollment rates are in contrast with the survey data. Net enrollment among children of both split and joint groups is actually higher, not lower, than the national average. This is not surprising given the greater wealth of migrants than the average rural population, and given the likely selectivity effect with those parents caring more about education (holding all else equal) being more likely to migrate to be able to pay for the education. Among children of primary schooling age (6-14), 95% of boys and 94% of girls living in the rural area were reported to be in school at the time of the survey. The urban numbers were almost identical, 95% for both boys and girls. The discrepancy with official statistics arises because the number of urban pupils attending private initiative schools is considerable, 34%, compared with 3% of rural pupils. These informal schools are frequently even more overcrowded and lacking facilities, but discussions with parents and teachers suggested that teachers in private initiative schools, despite salaries below those in government schools, are said to be more motivated since they are members of the communities and hired directly by the parents. Lastly, enrollment among young adolescents (15-18) was also high, particularly among children of split migrants living in the rural area, where 85% of young men and 80% of young women were still in school. Among those living in Nairobi, 58% of young men and 49% of young women were still in school, which is significantly lower[12]. While quality of urban schooling is mixed, its costs are higher than rural schools; restricting the sample to primary school aged children[13], the average first term costs were $13.84 in Nairobi, more than double the $6.83 in the rural

[12] P-value of t-test: 0.0000 for both. Note that a significant number of these are still attending primary school.
[13] Even though public primary education is free since January 2003, certain fees, uniform costs etc. do remain.

areas, a significant difference.[14] The private initiative schools are the most expensive, 33% more than urban government schools.

Overcrowding and high fees in slums were indeed a concern for parents. However, as was also mentioned by John and some others, exposure to English and to other tribes were thought to benefit the development of their children:

"They can become civilized very quickly in the city. They learn English and Kiswahili, and they would go to school with all different tribes and would learn a lot. Here they only have people like themselves in class". (Irongo, 46 years old, 9 children, living with his wife in the rural area)

Similarly, one entrepreneurial rural mother married to a rural based school teacher:

"It is better to raise your children in Nairobi than here in the village. In Nairobi there are so many ideas of getting a lot of money. […] The environment is also better. My sister's children [who are in Nairobi] *are very bright and they do not have a lot of chores to do after school like here, which means they can spend more time doing homework."* (Rose, 39 years old, 5 children)

Parents frequently weighed these positive attributes against exposure to 'bad behavior' in the slums; exposure to drugs, alcoholism, prostitution, and other "immoral" behavior:

"Here [in the village] *your child will not be influenced so much. After school you can give the child work to keep it busy so that they don't get a chance of moving around. Then the child can go into the books. In Nairobi, the kids can roam around after school."* (James, 64, 8 children, former split migrant)

Because child (dis) amenities featured prominently in the informal discussions on migration, the survey captured more systematically whether people's assessments of rural versus urban amenities corresponded with their migration strategies. Figure 4 shows the summary of responses, separately for split and joint migrant household heads. [15]

[14] P-value of t-test: 0.0000

[15] The variation in opinions shown below is *after* having controlled for (a) farm size, (b) years of education of both husband and wife, (c) experience since leaving school of both husband and wife, and (d) ethnicity through standard OLS regression. Hence, the gaps between split- and joint migrants are *not* reflective of differences in these variables.

[Figure 4]

Not surprisingly, it first shows that more than 90 percent of household heads, both split and joint, are of the opinion that they can earn more in Nairobi than in the area of the rural home. Similarly, approximately 80% of joint heads believe their wife is able to earn more in Nairobi than in the rural home compared with 20% of split heads. It is not unlikely, however, that some of the gap is due to heads rationalizing ex-post (after migrating) the benefits of their particular migration decision.

Consistent with the idea that child amenities are important, the figure shows that opinions on health facilities, food availability, and schooling quality correspond with the chosen migration strategy – joint household heads are more likely to favor Nairobi. The levels, however, are also important. For example, although joint household heads have a more favorable opinion of Nairobi health facilities (relative to their respective home areas) than split heads, still 60% of the latter think Nairobi health facilities are better. Of course, there is a strong tradeoff as slums are characterized by polluted rivers, lack of sewers, sanitation facilities, and garbage pick-up, thus exposing children to greater health risks. Almost all split and joint heads have unfavorable views of the Nairobi environment. With regards to schooling quality, joints have more favorable views than splits, yet still almost 40% of joints believe their rural school quality is better.

Finally, joint migrants share with split migrants the unfavorable view on exposure to bad influences children undergo in Nairobi; almost all respondents do not have a favorable opinion on the type of exposure children face in Nairobi relative to the rural areas. Not surprisingly, only a handful of people find that care of aging parents is easier in Nairobi, despite the otherwise favorable view on the relative quality of urban health facilities. And, very few migrants express the desire to retire in Nairobi. In sum, the picture that emerges from these correlations is consistent with the notion that people's migration strategy reflects people's rural-urban comparisons of child amenities alongside the usual comparison of income opportunities. That families still migrate jointly despite an overwhelmingly unfavorable view

regarding Nairobi's physical and social environment is an indication that they may be giving more weight to school quality and health facilities than these two dimensions. A perhaps more obvious reason for joint migration concerns the nature of the conjugal relationship between husbands and wives.

Migration, Marriage, and Imperfect Information

When Rose, the rural mother quoted above who would have preferred to raise her children in Nairobi, was asked why she could not go to Nairobi herself with the children, she replied:

"In Nairobi I cannot take care of my children alone; also, if my husband would still be teaching here [in the village] while I am in Nairobi, I might come back one year later and find him with another woman!" Rose (39 years)

Conversely, in his ethnographic work on Lesotho, Ferguson (1997) notes that

"Men, on the other hand, accuse women of wasting money, of spending it indiscriminately, or even of giving it to their lovers"

In fact, various anthropological studies indicate that many migrants reluctantly remit part of their wages to their wives. For example, in a study of a Luo community in Kenya's Nyanza Province, Francis (2000) notes:

"Few migrants were willing to delegate financial responsibility and decision-making power to their wives. This reluctance stemmed from a deep-seated distrust of women's reliability. …"

Similar observations of spousal distrust emerge in other Kenyan communities (Francis, 1998) and elsewhere in sub-Saharan Africa (Ferguson, 1997). In Kenya, this distrust may reflect real structural inequalities that are tied up in gendered property rights that differently shape incentives of how to allocate marital resources. Land tends to be inherited through the male line, and women risk eviction upon divorce or the death of the husband (Human Right's Watch, 2003). As one informant put it:

"When people [in the city] have AIDS they will come home to die. If the dying men are still young and the wife has not stayed on the shamba [farm] long she can be chased out by the brothers". Ephantus (39 years old)

As a result, women will want to maintain good ties with their own families as a means of insuring themselves against such events. This can take the form of monetary support, particularly when migrant husbands remit home, or other forms of assistance. This is the context within which men speak of women's 'divided loyalties' (Francis, 2000). In addition, women may seek to establish some degree of economic independence, for example through a small business, and use remittances towards that end. Therefore, husbands anticipating this, what they would consider, diversion of migrant resources, may be reluctant to undertake split migration, unless they are able to control how remittances are allocated. To ensure this control, information about the wife and the rural home more generally, is crucial. In fact, the majority of split migrants, 70%, acknowledged not knowing exactly how their wives spend remittances.

De Laat (2006) develops a model of moral hazard that highlights how urban husbands rely on a variety of strategies to collect more information about their rural wives. If more information enables husbands to ensure a certain allocation of remittances, we would first expect that split migrants will seek to ensure they are kept up to date on their rural wives and farms. This is indeed the case in the survey data. First, split migrant husbands spend more than 10% of their urban incomes on bus fares traveling home. Second, three quarters of them require their rural wives to submit budgets before remitting. And third a quarter of all the husband's siblings were reported to *"follow the affairs of the home of the spouse, e.g. farm, activities, budget, etc."*, which is distinct from support by the husband's siblings to the spouse in farm or household activities. In fact, only 10.4% of these siblings reported to follow the wife's affairs were reported to have assisted the wife and/or husband himself in farm or housework in the 4 months prior to the survey. Such siblings were 33% more likely to receive support from the migrant husband, financial support especially, than siblings not keeping an eye on the wife's affairs. Second, we would expect that when it becomes more difficult to know what wives are doing in the rural area, husbands intensify their efforts to collect information, and they choose whichever method is most efficient. This is also the case in the survey data. For example, the husbands requiring the budgets from their rural wives lived

considerably further away than the one quarter that did not require budget submissions; 4.31 hours travel instead of 3.58, a (significant) difference in distance of 20%. Further, when traveling home becomes more expensive, husbands will rely more on their siblings to keep an eye on their wives and, conversely, the more siblings the husband has to keep an eye on his wife, the less frequent he travels home. Third, we would expect that whenever husbands have more reason to believe their wives will display 'divided loyalties', they will spend more resources to keep an eye on their wives. Indeed, the data indicated that while husbands travel home less frequently when they have more siblings, they will travel home *more* frequently when their *wives* have more siblings. Similarly, wives with more siblings were significantly more likely to be required to submit budgets to their husbands.[16] Finally, we would expect that young unmarried couples anticipating split migration upon marriage would be more careful to get to know each other and build trust before marrying than couples anticipating joint migration. The survey data were also consistent with this. For example, at the time of marriage, split migrant couples had known each other longer than joint migrants; 2.3 years instead of 1.9 years, a difference of more than 18%[17]. They were also more likely to co-habitate before marriage - 55% of split migrants compared to 45% of joint migrants lived together before marriage.[18] Further, split migrants were much more likely to have paid (in-kind) bride price contributions to wives - 66% of split migrants compared with 35% of joint migrants[19]. This makes intuitively sense if a higher bride pride provides insurance to women in split migration if such women face a higher risk of divorce or even widowhood when their migrant husbands living alone in Nairobi engage in extra-marital sex. That husbands would increase in-kind but not monetary bride prices also makes intuitively sense – the former are much more difficult to divert that in-kind contributions. De Laat (2006) also develops an alternative model of altruism. The main prediction of this model is that information variables should not matter much. The intuition is that if husbands and wives are altruistic to each other, there is less likely to be a conflict over the allocation of marital resources, making information

[16] P-values are 0.008 and 0.062 respectively, controlling for language group and clustering on district.
[17] p-value = 0.056
[18] p-value = 0.002
[19] p-value = 0.000

variables less important. This prediction is not consistent with the findings mentioned above or with other findings. For example, there was little evidence that migrant husbands derived utility from visiting siblings in the rural area – more siblings *reduced* home visits. Nor was there evidence that they travel home to visit their children - the presence of children had no effect on home visits.

In short, the implication of these findings for the present purposes is that imperfect information – not knowing how and what your rural wife is doing - is likely to affect family migration decisions. Coupled with the empirical evidence that child amenities play an important role too, we can now summarize our model of family migration, where the key ingredient is the joint determination of child investments and migration patterns, which in turn depends on three key sets of variables. The first variable is the usual urban-rural wage differential, which makes migration to Nairobi an attractive strategy to pay for household investments, particularly human capital investments in children such as payment of school fees and bills from visits to health clinics. Holding everything else equal, an increase in urban wages raises the probability of migration, with an increase in the wife's wages raising the probability of joint migration. The second set of variables is the urban-rural assessments for a range of child (dis-) amenities such as education, health, and exposure to different social environments. Urban amenities raise the likelihood of migration, particularly joint migration. And the third set of variables influencing family migration decisions is captured by those variables linked to the imperfect information in the case of split migration. In particular, variables that raise the cost of acquiring information on the rural wife by the urban husband should increase joint (or no) migration. For example, since split husbands will rely more on monitoring by siblings when it becomes costly to travel home because of distance, and conversely, will travel home more frequently if he lacks siblings to keep an eye out on his wife and farm, we expect an increase in joint migration when acquiring information becomes more costly. Further, since husbands are also more likely to demand budgets when their wives have more siblings, and will need to travel home more frequently if their wives have more siblings, an increase in the number of siblings to the wife should increase joint migration.

Migration, Child (Dis-) Amenities, and Imperfect Information

Table 5 provides means along several key variables. It shows no significant difference between split and joint migrant heads in (1) the number of siblings by the head, (2) farm acreage, (3) income by the head, and (4) income by their spouses. However, joints are significantly younger and, consistent with the imperfect information hypothesis, spouses of joints have significantly more siblings, and the time it takes to travel home is significantly greater for joints.

[Table 5]

To explore the hypotheses more directly, we make use of the following econometric specification:

$$y_i = \alpha_o + \beta_1 p_i^s + \beta_2 p_i^d + \gamma R_i + \delta A_i + \varepsilon_{i,\eta} \quad (1)$$

where y_i indicates whether the migrant is joint. Variable p_i^s is the price of acquiring more information about the wife using the husband's siblings, which is measured by the number of siblings to the husband. p_i^d is the distance (in hours) to the rural home. R_i is a vector of variables that plausible affects the returns to acquiring more information; the number of siblings of the wife, rural female unskilled wage (the local unskilled daily wage a woman living in the village could get when working on a neighboring farm – a common means to supplant farm incomes), and, since land markets are very illiquid, farm acreage. Finally, A_i is the measure indicating whether people think the urban amenities (education, health, physical environment, and social environment) are better than the rural amenities in their area of origin. Fixed effects for the three main language groups in Kenya (Bantu, Nilotic, Cushitic) are also included. The error term, $\varepsilon_{i,\eta}$ captures unobserved heterogeneity and is assumed to follow a normal distribution and to be independently distributed across districts of origin but correlated within districts of origin[20], with variance σ_η^2 the same for all migrants from the same home area.

[20] Kenya counts 69 districts.

Table 6 shows the results.[21] It is possible that ratings on the quality of urban-rural amenities may change following a particular migration strategy and thus not be entirely exogenous to migration. The first two regressions omit these rating variables to see whether their inclusion affects the findings on variables capturing the cost of getting more information on the rural spouse and variables affecting the returns to that information. The third regression shows the imperfect information findings are robust to the inclusion of the variables capturing the ratings on rural-urban amenities; the coefficient estimates are only marginally affected.

[Table 6]

Consistent with the argument that parents care about amenities that affect the well-being of their children in deciding on family migration, the third regression shows that couples are more likely to migrate jointly if they have positive ratings on the quality of Nairobi schools and health services. Schooling in particular is important, with those rating Nairobi schooling better being 27 percentage points more likely to migrate jointly, compared with 17 percentage points for health services. Neither pollution of the environment or rating of child exposure to the social influences by others are significant. Recall, however, that there was little variation in these variables, with people rating Nairobi overwhelmingly more negative than their rural home areas along these two dimensions. The rating on whether food is more easily obtained in

[21] It is almost impossible to definitively identify whether variation in child amenities induces variation in migration patterns. While, for example, panel data could control for heterogeneity in preferences over child amenities that would otherwise induce a selection problem in empirical estimation (some care more about school quality than others for example), simultaneity bias may remain an issue with child amenities being endogenous in the long-run to migration patterns. Remittances could be used toward rural public goods as communities hold *harambees*, local fundraisers, to help pay for schools or health clinics. Randomized placement of amenities is very unlikely, as would it be difficult to find an instrument that affects migration only through its effect on amenities. In the case of imperfect information the difficulty is less problematic since selection bias introduced by altruism between the spouses will tend to reduce problems of imperfect information and bias coefficients toward zero on variables that affect the cost of acquiring information or variables that affect the benefit of more information. To see this, the combination of (altruistic couple, large distance) can have the same probability of split migration as the combination (non-altruistic couple, short distance). In other words, unobserved selection on altruism will have the effect of reducing the coefficient on rural-urban distance in a regression predicting spousal monitoring or split versus joint migration because altruism reduces the need to monitor. With this caveat in mind, additional empirical evidence is highlighted below that is consistent with the main argument of the paper that, taken together, highlights how amenities and information are likely to play an important role in migration patterns.

Nairobi is left out because it is determined by other included variables such as wages and farm size. Notice too that both using actual earnings by the husband (regressions 1 and 2) and the relative urban-rural rating of his earnings (regression 3) are significantly negatively correlated with joint migration. For every 1000 Ksh increase in the husband's earnings ($13), his wife is 6.7% less likely to be living with him in Nairobi. In other words, comparing two women with the same urban-rural income differential, the woman whose husband can earn more in Nairobi is more likely to remain in the rural area. Finally, unsurprisingly, a positive rating on the spousal earnings in Nairobi is most strongly correlated with joint migration

Consistent with the imperfect information hypothesis, couples for whom acquiring information is more costly are more likely to migrate jointly, as are couples where there is an increased likelihood over conflict over the allocation of resources such as remittances and farm management. For example, using regression 2, an increase in travel time to the rural home by one hour increases the likelihood of joint migration by 1.8 percent. Evaluated at the mean farm acreage, the likelihood that a couple migrates jointly decreases by 0.89 percent with each extra sibling by the head. This likelihood decreases further as farm size increases. Naturally, one explanation could be that more siblings can assist the wife at the farm, making it easier for the husband to migrate to Nairobi alone. However, at best this can only be part of the explanation. Among the quarter of all the siblings reported to follow the wife's home affairs, only 10.4% are reported to have assisted the wife and/or husband himself in farm or housework. Among siblings not following the wife's home affairs, this number is even lower, 4.6%. An alternative explanation consistent with the imperfect information hypothesis would be that husbands are concerned about the allocation of resources generated by the larger farms. Conversely, increased farm size reduces joint migration, especially if husbands have siblings. Finally, while the husbands' siblings enable split migration, the wife's siblings induce joint migration. With each extra sibling, the couple is 3 percent more likely to migrate jointly, consistent with the fact that husbands are concerned that split migration would cause their wives "divided loyalties" to divert resources such as remittances. Further, while some wives will

undoubtedly join their husbands to Nairobi to seek urban incomes that can support more siblings, there is little evidence that this is a primary motivation. – 71.9% of joint couples report not providing financial support to any of the wives' siblings. In fact, only 10.5% of siblings to Nairobi based wives were reported to have received financial support in the previous 4 months. Among these 10.5%, the average amount was $10, the median $3.95.

Table 7 explores to what extent these findings also hold with respect to the location of children – recall above that even among joint migrants a significant proportion of biological children is not living in Nairobi with the parents. Hence, we would expect the association between the urban-rural amenities ranking variables to be stronger with the location of the child than with the location of the mother, and conversely, the imperfect information variables to be stronger with the mother's location than with the children's location.

[Table 7]

Table 7 shows that this is indeed true. The patterns are generally the same as with the previous table with perceptions of school quality and health services strongly correlated with the location of the child. The new finding that stands out most is that views on Nairobi's social environment for a child are significant and have a large impact on the child's location – parents with a negative view on their child's exposure to others in Nairobi are 30% more likely to be living in the rural area. Conversely, the number of husband's siblings is no longer significant in the third regression, consistent with the notion that information variables should be more strongly correlated with the mother's location than the children's.

Conclusion

It is well known that men are the predominant rural-urban migrants. Married women are commonly assumed to be left behind in the rural area whenever their urban husbands do not have sufficient job stability and high enough wages to afford family migration. This view is reflective of two commonly held assumptions. The first assumption is that family migration decisions are made without carefully weighing the costs and benefits to children because urban environments are by definition more adequate than rural environments. And, the second assumption, that family migration decisions are taken independently of the actions by wives. In particular, the extent to which husbands and wives agree on the allocation of resources and the ease with which information barriers can be overcome is commonly overlooked.

We argue in this paper that we can improve our understanding of migration by looking more closely at the motivations of migration – especially the importance of child well-being and the perceptions parents have on how rural-to-urban migration will affect this well-being for family migration decisions. We show that parents migrate to pay for school fees and clinics, and children are raised in rural homes or the urban area depending on the access either environment gives to quality education, with quality defined broadly to include exposure to new ideas, other languages, etc., but also depending on the perceived exposure to health risks and the out-of-school social environment. We also show that even when there can be substantial benefits to split migration in terms of low cost access to rural amenities, these benefits may not always weigh up against the inability of split migrant husbands to ensure a certain allocation of resources due to lack of information on their rural spouses. Joint migration becomes more likely when incomplete information is difficult to overcome, for example because the rural home is far or the husband lacks siblings who can collect information on his behalf, or whenever the wife has more siblings to support.

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Appendix: Figures and Tables

Figure 1: Age-Sex Composition of Nairobi, Kenya, Slum Populations (2000)

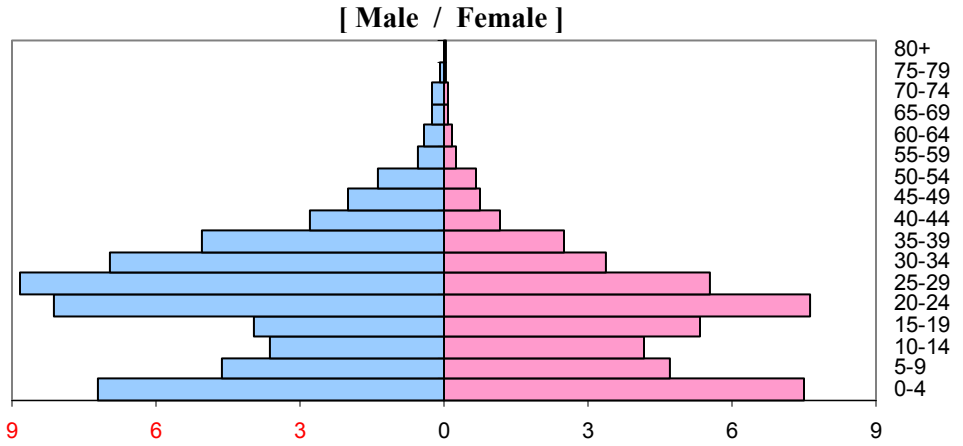
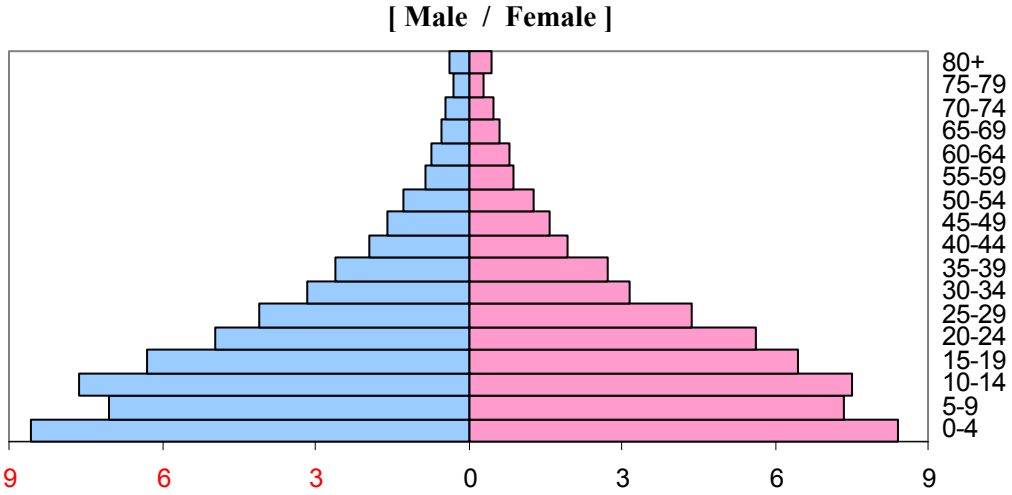


Figure 2: Age-Sex Composition of Nairobi, Kenya, National Population (1999)



Source: APHRC (2002)

Table 1:

Spatial Allocation of Biological Children

	Split				Joint			
	Urban	Rural	Non - Hholder	Total	Urban	Rural	Non - Hholder	Total
0-5	0.01	1.05	0.01	1.06	0.96	0.00	0.04	1.00
	(0%)	(99%)	(0%)		(96%)	(0%)	(4%)	
6-14	0.02	1.23	0.02	1.27	0.94	0.00	0.19	1.13
	(2%)	(97%)	(1%)		(83%)	(0%)	(17%)	
15-19	0.03	0.33	0.01	0.37	0.26	0.00	0.10	0.36
	(7%)	(89%)	(3%)		(72%)	(0%)	(28%)	
Total	0.06	2.61	0.03	**2.70**	2.16	0.00	0.33	**2.49**
%(row)	(2%)	(97%)	(1%)		(87%)	(0%)	(13%)	

Table 2:

Biological Non-householder children

Lives with whom	**Split**	**Joint**
# Observations:	(21)	(171)
Him/herself	14.3%	4.1%
Parents of head	14.3%	56.1%
Parents of spouse	0.0%	12.9%
Siblings of head	9.5%	6.4%
Siblings of spouse	4.8%	1.2%
Other	57.1%	19.3%
Total (%)	100%	100%

Table 3:

Location of grandfather (if alive)

Father head (joint) lives: (n=327)	%	Cumulative.
In this slum	2.8%	2.8%
Other Nairobi slum	0.6%	3.4%
Nairobi non-slum	0.6%	4.0%
Rural home village	91.4%	95.4%
Upcountry village	3.4%	98.8%
Upcountry city	0.9%	99.7%
Other	0.3%	100.0%

Figure 3:

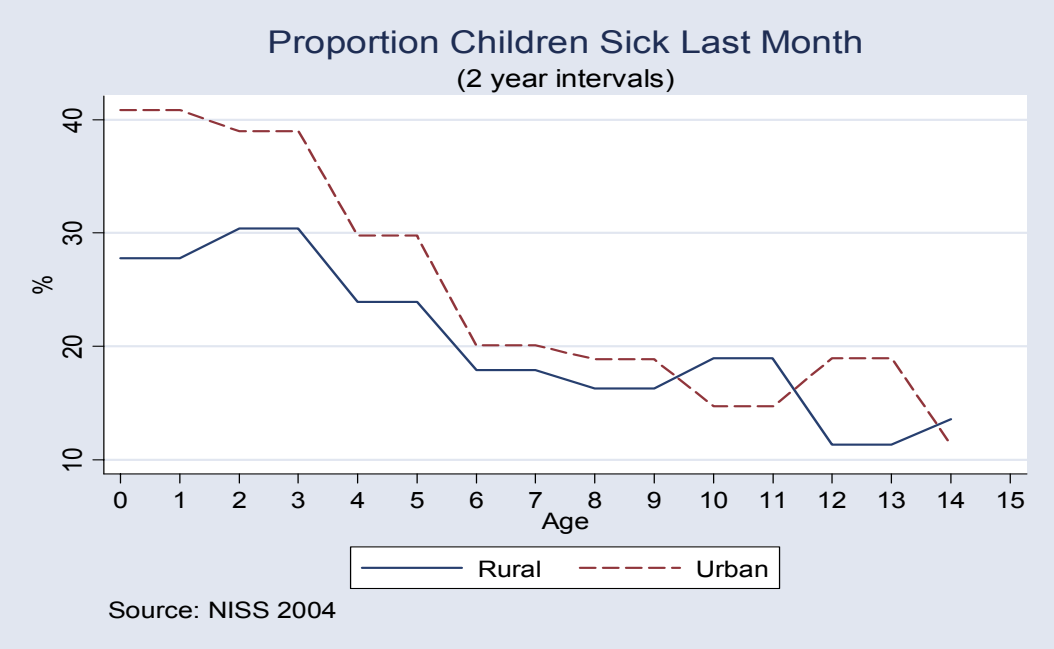


Figure 4:

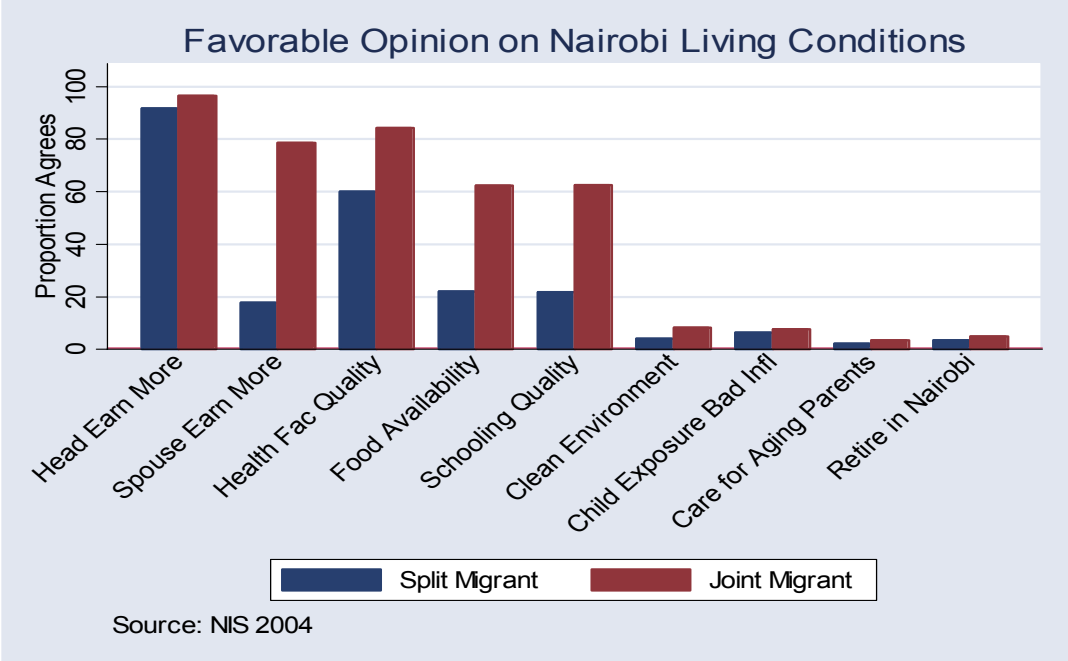


Table 5:

	Split	Joint	Difference
# Siblings head	4.786	4.917	
# Siblings spouse	4.566	5.148	***
Travel time (hrs)	4.14	4.973	***
Farm acreage	4.60	5.32	
Female rural unskilled wage	90.34	80.67	***
Age head	36.7	33.98	***
Age spouse	29.88	27.96	***
Income head (Ksh 1000s)	6.26	5.90	
Income spouse (Ksh 1000s)	1.82	2.11	
N	535	560	

Difference significant at ***1%, **5%, *10%
Among heads born outside Nairobi

Table 6:

	Migrating Jointly		
# Siblings head	-0.018**	-0.0110	-0.0059
	(0.0070)	(0.0077)	(0.0113)
# Siblings spouse	0.0340***	0.0300***	0.0228*
	(0.0009)	(0.0110)	(0.0138)
Travel time (hrs)	0.0171*	0.0175**	0.0272***
	(0.0089)	(0.0084)	(0.0010)
Farm acreage	0.0002	-0.0085**	-0.0141***
	(0.0004)	(0.0035)	(0.0035)
Farm acreage * Siblings head		-0.0018**	-0.0018*
		(0.0007)	(0.0009)
Farm acreage * Siblings spouse		0.0025***	0.0036***
		(0.0008)	(0.0010)
Female rural unskilled wage	-0.0006	-0.0006	-0.0002
	(0.0005)	(0.0005)	(0.0004)
Age head	-0.0424	-0.0430	-0.0495
	(0.0278)	(0.0278)	(0.0341)
Age head squared	0.0003	0.0003	0.0005
	(0.0003)	(0.0003)	(0.0004)
Age spouse	0.0220	0.0235	-0.054
	(0.01220)	(0.0222)	(0.0310)
Age spouse squared	-0.0003	-0.0003	0.0001
	(0.0003)	(0.0003)	(0.0004)
Income head (Ksh 1000s)	-0.0080**	-0.0067**	
	(0.0033)	(0.0032)	
Income spouse (Ksh 1000s)	0.0087**	0.0096**	
	(0.0038)	(0.0042)	
Opinion: Nairobi higher earnings head			-0.1016*
			(0.0611)
Opinion: Nairobi higher earnings spouse			0.7826***
			(0.0510)
Opinion: Nairobi better schools			0.2745***
			(0.0508)
Opinion: Nairobi better clinics			0.1670***
			(0.0477)
Opinion: Nairobi less pollution			-0.0315
			(0.0844)
Opinion: Nairobi fewer negative influences by others			0.0464
			(0.0604)
Language group controls (Bantu, Nilotic, Cushitic)	Yes	Yes	Yes
N	1108	1108	1108
Pseudo R-squared	0.0828	0.0871	0.5060

Probit estimation with robust standard errors corrected for clustering on origin district
Marginal probability coefficients reported
***1%, **5%, *10%

Table 7:

	Child Lives in Nairobi		
Female child	0.0811**	0.0799**	0.0293
	(0.0345)	(0.0332)	(0.0325)
Primary school age (6-14)	-0.00062	-0.0069	-0.0523
(relative to 0-5 years)	(0.0330)	(0.0324)	(0.0422)
Secondary school age (15-18)	0.0034	0.0027	0.0301
(relative to 0-5 years)	(0.0499)	(0.0446)	(0.0679)
Primary age * Female	-0.0890*	-0.0866*	-0.0679
	(0.0469)	(0.0453)	(0.0636)
Secondary age * Female	-0.096*	-0.0948*	-0.095
	(0.0534)	(0.0542)	(0.0738)
# Siblings head	-0.0236***	-0.0328***	-0.0112
	(0.0086)	(0.0123)	(0.0108)
# Siblings spouse	0.0424***	0.0467***	0.0317***
	(0.0093)	(0.0145)	(0.0118)
Travel time (hrs)	0.0191*	0.0189*	0.0339***
	(0.0110)	(0.0110)	(0.0125)
Farm acreage	-0.0072*	-0.0145*	-0.0034
	(0.0043)	(0.0087)	(0.0055)
Farm acreage * Siblings head		0.00278	
		(0.0019)	
Farm acreage * Siblings spouse		-0.0015	
		(0.0025)	
Female rural unskilled wage	-0.0011*	-0.0011*	-0.0008
	(0.0010)	(0.0006)	(0.0006)
Age head	-0.0530*	-0.0551*	-0.0472
	(0.0305)	(0.0302)	(0.0402)
Age head squared	0.0005	0.0005	0.0005
	(0.0004)	(0.0004)	(0.0005)
Age spouse	0.0134	0.0147	-0.0067
	(0.0315)	(0.0311)	(0.0313)
Age spouse squared	-0.0001	-0.0002	0.0001
	(0.0005)	(0.0005)	(0.0005)
Income head (Ksh 1000s)	-0.0106**	-0.0110**	
	(0.0045)	(0.0044)	
Income spouse (Ksh 1000s)	0.0057	0.0057	
	(0.0044)	(0.0043)	
Opinion: Nairobi higher earnings head			-0.0288
			(0.0835)
Opinion: Nairobi higher earnings spouse			0.7241***
			(0.0567)
Opinion: Nairobi better schools			0.3517***
			(0.0624)
Opinion: Nairobi better clinics			0.1638***
			(0.0574)
Opinion: Nairobi less pollution			-0.0192
			(0.0827)
Opinion: Nairobi fewer negative influences by others			0.3007***
			(0.0830)
Language group controls (Bantu, Nilotic, Cushitic)	Yes	Yes	Yes
N	2486	2486	2486
Pseudo R-squared	0.1064	0.1082	0.5273

Probit estimation with robust standard errors corrected for clustering on origin district
Marginal probability coefficients reported
***1%, **5%, *10%